ZOHO 2016

ROUND 2:

1. Given a string, remove the characters that are same and adjacent to each other. Repeat the same till no same characters are adjacent or until we get a empty string. Print the string at each stage.

Sample IO:

abccba -> abba -> aa -> empty string

abccccd -> abd

2.Given a string of parenthesis, find the maximum length of well balanced parenthesis.

Sample IO:

()()()(()() - 6

(()) – 4

()()()(())( - 10

3.Given a string of parenthesis, output yes if the well balanced otherwise no.

Sample IO:

[{}]() – YES

[{]{([) – NO

4. Given a parent 2d array find if the child 2d array is present in parent or not. Print yes if present otherwise no.

Sample IO:

3 4 m n

1 2 3 4

5 6 7 8

9 10 11 12

2 2 - p q

6 7

10 11

Output : YES

Sample IO 2:

3 4

1 2 3 4

5 6 7 8

9 10 7 12

2 2

6 7

10 11

Output : NO

5. Given a 2d array of numbers output the elements that are common in all the rows. Time complexity O(mn) m – no of rows and n – no of cols. (Your algo should traverse the 2d array once only to find the answer).

Sample IO: 4 4 - m n

1 2 1 8

2 1 8 7

3 7 1 4

1 1 8 9

Output : 1

3 3

1 2 1

0 1 2

2 2 2

Output : 2

6. You know the price of share for n instances. You can buy one share , sell any no of share or don’t do anything at one instances. What will be the optimal price if u did ur sharing business optimally.

Sample IO 1:

3 - n

1 2 100 - n space separated integers

Profit : 97

You bought share at n = 1 , cost = 1 , no of share total= 1

You bought share at n = 2 , cost = 3 , no of share total= 2

You sold 2 share at n =3 , sell = 100 , you got 200

Profit = 200 – 3 = 197

Sample IO 2:

3

5 3 2

Profit = 0

Sample IO 3:

4

1 3 1 2

You bought share at n = 1 , cost = 1 , no of share total= 1

You sold one share at n = 2 , sell = 3 , profit = 3- 1 = 2

You bought share at n = 3 , cost = 1 , no of share total= 1

You sold one share at n = 2 , sell = 2 , profit = 2 - 1 = 1

Total profit = 2 + 1 = 3

7. Given a array of numbers , find an index such that left sum = right sum. If no such index exists print -1. Assume left most and right most index value = 0.

Sample IO :

3 n

1 2 3 - n space separated integers

output : -1 no index exists

3 - n

1 2 1 - n space separated integers

output : index 2

3 - n

1 -1 2 - n space separated integers

output : index 3

Given a number n and k , if from 2 to n , if there are atleast k nolback primes output yes otherwise no.

8. A prime is said to be nolback prime, if the prime can be represented as sum of 2 adjacent primes and 1. Two primes are said to be adjacent if there are no primes between those.

13 – 5 + 7 + 1

Sample IO: 15 1 - n k

Output : YES

From 2 to 15 there are atleast 1 nolback primes. (13)

9. Given a array of numbers and low and high value, output the numbers that belong in the range [low , high] but not in the array.

Sample IO:

5 n

1 5 10 12 14 n space separated integers

10 15 low high

Op: 11 13 15